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REMARKS

Claims 1-12 were originally presented in the subject application, and claims 13-18 added during prosecution. No claims have herein been amended, canceled or added. Therefore, claims 1-18 remain in this case.

Applicants respectfully request entry of these remarks, and reconsideration and withdrawal of the sole remaining ground of rejection.

35 U.S.C. §102 Rejection

The Final Office Action rejected claims 1-18 under 35 U.S.C. §102(e), as allegedly anticipated by Wilkinson (U.S. Patent Application Publication No. 20030023954). Applicants respectfully, but most strenuously, traverse this rejection.

Wilkinson generally discloses a system where a Java application is created at a work station, then downloaded to a connected smart card. The application then executes on a card Java virtual machine on the smart card supporting only a subset of codes. Data for processing and commands can be sent from the work station to the smart card, and results of processing an application stored on the card by the card JVM can be sent from the smart card to the work station. In contrast, the present invention discloses, for example, assembling an application on the card, and accessing a full VM by the card (via the limited VM) in order for the card to execute additional instructions not supported by the limited VM.

More specifically, claim 1 recites a computer-implemented method for providing a set of software components for component-oriented software development. The method comprises providing a set of software components out of which a software application to be executed by an apparatus comprising processor means and memory means can be partly or entirely assembled. The software components are self-contained, reusable software units that can be visually composed into applets or applications using visual application builder tools. The method further

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comprises assigning a different numeric identifier to each component of the set of software components, and storing each assigned numeric identifier in the corresponding component.

The arguments below appeared as part of three distinct arguments regarding claim 1 in Applicants' prior response. However, only one of those three arguments was substantively addressed in the final Office Action (see page 6). Thus, Applicants herein repeat the arguments that were not addressed. While Applicants continue to disagree regarding the ID numbers, and maintain the prior argument by reference herein, it may be helpful to leave that argument out of the text, so that the other arguments can be substantively addressed.

Against the providing aspect of claim 1, the Final Office Action cites to Wilkinson at numbered paragraph 0010. However, the cited section merely discloses that new applications from different sources may be downloaded to a smart card without compromising security. Applicants submit there is no disclosure, teaching or suggestion of the claimed components, out of which a software application to be executed can be partly or entirely assembled. Instead, the cited section of Wilkinson merely discloses already created applications.

Against the wherein clause of claim 1, the Final Office Action cites to Wilkinson at numbered paragraph 0013:

The integrated circuit card 10 contains a card Java virtual machine (Card JVM) 16, which is used to interpret applications which are contained on card 10.

Again, however, Applicants submit the cited section says nothing regarding software components, only finished applications.

Against the storing aspect of claim 1, the Final Office Action also cites to Wilkinson at numbered paragraph 0012. However, the cited section of Wilkinson et al. fails to disclose storing each assigned numeric identifier in the corresponding component. In contrast, the strings in the Java class file constant pool are replaced with the integers/IDs. See Wilkinson et al. at numbered paragraph 0018. The integers/IDs are not stored in the elements represented by the strings.

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Therefore, Applicants submit that claim 1 cannot be anticipated by Wilkinson.

The comments made above with respect to claim 1 are equally applicable to claims 7 and 9, and the comments regarding the providing aspect of claim 1 are applicable to claim 11. Therefore, claims 7, 9 and 11 also cannot be anticipated by Wilkinson.

Applicants further submit that the dependent claims not specifically addressed herein are allowable for the same reasons as the independent claims from which they directly or ultimately depend, as well as for their additional limitations.

For example, claim 5 recites providing the apparatus of claim 1 with a full virtual machine being able to execute every instruction for a predetermined object-oriented programming language.

Against claim 5 the Final Office Action cites to Wilkinson at numbered paragraph 0038. The cited paragraph includes the disclosure that “[a] processor uses an interpreter to interpret the first application for execution.” However, Applicants submit there is no disclosure regarding what instructions are contained in the first application, let alone *every* instruction in the programming language being used.

Against the argument in the paragraph above, the final Office Action cites to numbered paragraph 0006 of Wilkinson. However, the cited paragraph, appearing in the Background section, merely discloses that a Java virtual machine is needed to run a Java application on a specific platform, as well as a mechanism for loading the Java application on the platform, both the JVM and the loading operating within the constraints of the platform. Again, however, Applicants submit there is no disclosure regarding the extent of the Java virtual machine (i.e., full or partial), just a general statement about the need for a JVM to run Java applications.

Therefore, Applicants submit that claim 5 cannot be anticipated by Wilkinson.

As another example, claims 14 and 15 each recite that the set of software components is at least one of, subsequent to being partly or entirely assembled into the software application,

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updated by updating at least one software component of the set of software components and supplemented by adding at least one software component to the set of software components.

Against claims 14 and 15, the Final Office Action cites to Wilkinson at numbered paragraph 0078. However, the cited section discloses coalescing several Java class files forming an application into a single card class file. This is done on the work station, then the complete Java application is transferred to the smart card. See Wilkinson at, for example, numbered paragraph 0092. Applicants submit there is no disclosure, teaching or suggestion of updating a software component, nor adding a software component, merely creating it on the work station and downloading it to a connected smart card.

The final Office Action addresses the argument in the paragraph above by citing to the byte codes of Wilkinson at FIGs. 9 and 10, and numbered paragraphs 0106 and 0107. As an initial matter, Applicants submit that the byte codes of Wilkinson are not the same as the claimed software components. The Wilkinson byte codes are compiled Java source code, whereas claims 1 and 11, from which claims 14 and 15 depend, respectively, set forth that the software components are used to create an executable software application, and are self-contained, reusable software units that can be visually composed into applets or applications using visual application builder tools. Thus, adding byte codes is not the same as updating or adding the claimed software components. Moreover, Applicants submit that Wilkinson discourages adding new byte codes. See the last sentence of numbered paragraph 0107 of Wilkinson.

Therefore, Applicants submit that neither claim 14 or 15 cannot be anticipated by Wilkinson.

As still a further example, claim 16 recites, in part, accessing, by the apparatus with a limited Virtual Machine, a full Virtual Machine for the predetermined object-oriented programming language residing at a computing unit coupled to the apparatus, the accessing allowing the apparatus to execute additional instructions of the predetermined object-oriented programming language.

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Against the accessing aspect of claim 16, the Final Office Action again cites to Wilkinson at numbered paragraph 0078. However, as noted above, the cited section discloses coalescing several Java class files forming an application into a single card class file. Applicants submit there is no disclosure, teaching or suggestion of accessing a full Java virtual machine by the apparatus with a limited Java virtual machine, the full JVM residing on a computing unit coupled to the apparatus. Only the steps involved in coalescing the Java class files into one are disclosed, and these steps are performed on the work station.

The final Office Action addresses the argument in the paragraph above by citing to Wilkinson at numbered paragraph 0058. However, numbered paragraph 0058 is the brief description of FIG. 15 in the Brief Description of the Drawing section of Wilkinson, and merely states that "FIG. 15 is a flow diagram illustrating the overall architecture of the Card Java virtual machine." Looking at the flow diagram of FIG. 15, it is clear that nothing like the accessing aspect of claim 16 is disclosed. At most, FIG. 15 discloses the Card Java virtual machine sending an error message to the terminal. There is no disclosure, teaching or suggestion of accessing a full Java virtual machine by the apparatus with a limited Java virtual machine, the full JVM residing on a computing unit coupled to the apparatus. Moreover, there is no disclosure, teaching or suggestion therein of the card Java virtual machine in Wilkinson being able to execute additional instructions due to accessing the full JVM.

Therefore, Applicants submit that claim 16 cannot be anticipated by Wilkinson.

CONCLUSION

Applicants submit that the dependent claims not specifically addressed herein are allowable for the same reasons as the independent claims from which they directly or ultimately depend, as well as for their additional limitations.

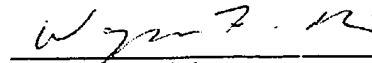
For all the above reasons, Applicants maintain that the claims of the subject application define patentable subject matter and earnestly request allowance of claims 1-18.

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If a telephone conference would be of assistance in advancing prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone him at the number provided.

Respectfully submitted,



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